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Competency And Skill Needs Of Technical Teachers Teaching Electrical Installation Trade In Delta State Technical Colleges

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ABSTRACT

The competency and skill needs of technical teachers instructing electrical installation trade at Delta State technical colleges were investigated in this study. The research design used in the study was a descriptive survey. The study's population consisted of 2,058 electrical installation students from Delta State technical colleges and 38 electrical installation teachers. Since the complete teacher population was utilised, there was no sample from that group. On the other hand, the simple random sampling technique was used to select a sample of the student population. A questionnaire was the tool employed in this study to collect data. Experts examined the questionnaire's face and content, and the Cronbach alpha reliability coefficient was utilised to gauge the instrument's reliability. The data was analysed using the mean, standard deviation, and t-test inferential statistics. The study's conclusions highlighted the competency and skill requirements for electrical installation instructors at Delta State Technical Colleges; they also showed that there were no appreciable differences in the technical competencies required of instructors to effectively teach electrical installation across Delta State Technical Colleges, nor in their levels of knowledge and skill. The study recommended that modern infrastructure and amenities should be provided by the government, regular conferences and adequate training should be planned periodically for students and teachers. The study also recommended that a strong monitoring and assessment system should be provided to evaluate professional development programs, resource use and learning outcomes periodically.

Keywords: Competency Needs, Skill needs, Technical Teachers, Electrical Installation Trade

INTRODUCTION

Technical education is the kind of education needed to be independent. It consists of the theoretical and scientific information and abilities that allow a person obtaining such education to resolve problems in his field of study relating to economics and production engineering. In actuality, the primary goals of technical education are to foster self-sufficiency and prepare graduates for meaningful careers in their fields of study. Researchers, however, have expressed dissatisfaction with current technical education program graduates due to their lack of understanding of important skills needed for job. Teachers are mostly to blame for the inefficiency of the labour market since they create a technical skills gap between their pupils and the industry, a problem that businesses, parents, and educators in Nigeria are increasingly concerned about. It is thought that until technical teachers' competency requirements are met, their training will not be adequate to fulfil the demands of the modern electrical installation industry.

Competence can be defined as the state or characteristic of being suitably qualified and competent of carrying out a specific function, or as a mix of knowledge, skills, and conduct used to increase performance. Competence, according to Ogunyinka, Okeke, and Adedoyin (2015), is the ability to apply social and cognitive skills to solve challenges in life, as well as attitudes and aptitudes that are

acquired. Employers have consistently stated over time that instructors are the knowledge keepers. According to Parkay (2010), teaching is the most significant occupation in the world. Teachers are the lifeblood of educational institutions, and while no educational system can match their calibre and dedication, the effectiveness of any given system greatly depends on the educational achievement of its teachers. However, considering the current state of technical teachers' proficiency in the profession of electrical installation in technical institutions is concerning and sad. It is a fact that there is inadequate training for technology instructors, particularly trade teachers in electrical installation at technical institutions, regarding the necessity of retraining technical teachers. It is advisable to encourage teachers who received their training with antiquated equipment to upgrade their knowledge by enrolling in technical teacher training programs. Technical teachers must have the up-to-date, pertinent competencies and skills necessary to stay up to date with the practices of their field in order to work effectively.

Put another way, skill is the capacity to perform an action well, particularly after practice, development, and learning. According to Okorie (2000), when performance activities are linked with procedural instructions, skill develops as well. The development of students' skills and capacities in technical education is contingent upon teachers demonstrating genuine, hands-on improvement in their job. Enhancing one's skills is crucial for technical education. The following benefits of technical education are a result of Goro's (2000) emphasis on the value of skill acquisition. In addition to fostering self-reliance in both educators and students, it lowers unemployment, promotes economic growth, and fosters future skill development. Poverty is also lessened by using learnt skills to address pressing issues.

The productive capacities acquired through education as training in both formal and informal strategies, according to Ifeanyichukwu, Uzoagulu, and Ifeyinwa (2018), can be referred to as skill development. It allows people in all sectors of the economy to become fully and productively engaged in their livelihoods and has the opportunity to adopt those capacities to access changing labour market and economic demands. It centres on the development and learning of skills. It is the process of honing particular abilities so that you can carry out tasks more quickly and effectively. Technical institutes, which are specialised training facilities, are where skill development takes place. The people who are responsible for imparting these abilities and information are known as technical instructors or teachers. The calibre of classroom instruction directly affects the calibre of education. Academic credentials, knowledge, competence, and teaching skills, including commitment, do, in fact, have beneficial and efficient effects on teaching and learning (FRN, 2004).

Education consists of various elements from various perspectives, including the instructor, the learners, the curriculum, instructional strategies, hands-on activities, and learning resources. Students' chances are often greatly influenced by the qualifications and competences of their teachers. The goal of the nation as a whole is to create individuals who possess the knowledge, abilities, moral principles, and sound judgement necessary to live well, engage with one another, and positively impact the social, political, and economic advancement of their community.

It has been found that the majority of students lack workplace abilities, employability skills, and job creation competences once they graduate (Ogbuanya, Akintola, & Bakere, 2017). Professional test results indicate extremely poor performance, which can be attributed to inadequate training, inefficient training effects on students, and a weak connection to the labour market. Maclean and Kerre (2009) proposed that there is a need for qualified, highly skilled, and experienced technical teachers who have the practical skills and technique to influence those capabilities because of the high expectations placed on technical education students' preparation for work.

A technical instructor needs to have certain qualities in order to develop highly intelligent technical graduates. A technical teacher should possess a number of essential skills, such as subject matter expertise. The National Policy on Education (FRN, 2004) asserts that teachers are the key to national development and that "No education system can rise above the quality of its teachers." The instructor has formal participation and experience that have equipped them with professional knowledge and skills. They are the front-line educators' service providers. According to Mahmood and Hanafi (2013), a teacher's success is determined by their academic background, the calibre of their training, their experiences in the classroom, their pedagogical practices, their mentoring, professional growth, their commitment, their dedication, their classroom management abilities, and their topic knowledge.

One factor that might be connected to a teacher's efficacy is their subject-matter expertise. Research has indicated a robust association between an educator's subject matter expertise and the learning objectives related to self-sufficiency. Another factor that's frequently used to gauge a teacher's quality is experience. Experience gained over time is thought to be the most important prerequisite for skill. Research has indicated a correlation, albeit not necessarily a strong one, between the number of years of experience and the effectiveness of teachers (Murmane & Philip, 2002). When dealing with pupils to make decisions, seasoned teachers are more likely to be in charge in their classes than new ones. They are thought to have accumulated years of service along with a variety of teaching techniques and abilities. It was discovered by Hagger and McIntyre (2000) that less than three years of experience makes a teacher less successful than a senior teacher. Adeyemi (2008) also noted that, as indicated by students' performance in senior secondary schools, teachers' teaching experience had a considerable impact on students' learning results. Schools with a higher percentage of instructors with five years or more of experience typically outperform those with a lower percentage of teachers with less than five years of experience.

Good communication is yet another essential technical teaching ability. A technical instructor should be able to simplify difficult ideas and use realistic, real-world examples to make learning and teaching more interesting. They must be capable of critical thinking, problem-solving, entrepreneurship, and leadership. Technical teachers have a specific responsibility to help their students become self-reliant. By giving them the tools they need and giving them the confidence to tackle obstacles in life, they enable their students to take ownership of their education, problem-solving skills, and uncertainty. Ogwo and Oranu (2006) list information and communication technology proficiency, interpersonal and intrapersonal skills, and laboratory and workshop management as additional abilities relevant to technical teachers. Without assuming these competencies, it is impossible to discuss the requirements for a technical instructor in an effective manner.

Since technology helps both teachers and students in their teaching and learning, it is expected of technical teachers to possess a high level of understanding on equality, ethics in education, and technology. They have access to and can analyse a large amount of data for various types of study, which provides them with a strong tool for sharing what they have gained and motivates them to learn even more. To properly manage a classroom in a learning environment, a teacher needs to possess a high level of competence and experience. Having said all of this, it is crucial to remember that without incorporating teacher education, these talents cannot develop to their full potential.

The professional education that teachers receive to become skilled in their roles is known as teacher education. According to Adewuyi and Ogunwuyi (2002), teacher education is the process of providing professional education and specialised training to persons within a given time frame with the goal of preparing them to raise and raise children into responsible and productive members of society. Research has shown that many Nigerian teachers fall short of the minimal international standard. This is because many inexperienced workers are employed across the nation's states, and those who are employed do not receive the training required for professional advancement. Osokoya (2012) noted that teaching will continue to be open until the government implements this strategy and makes teacher education mandatory, which will further undermine the professionalism of the teaching profession.

One of the courses offered in technical institutes is Electrical Installation. It gives people the information and abilities needed for independence and technological progress. It broadens a person's horizons intellectually in the realm of electrical and gives them the creative spirit and abilities needed for information transfer and independence (Igaja, 2024). The trade areas of electrical installation include winding electrical machines, cable joining, battery charging and repairs, and domestic and industrial installation. The course includes both theoretical and practical components that culminate in the use of tools, equipment, and materials to produce things and services. Egboh (2010) asserts that the degree of scientific and technological advancement in the many fields of technical education, most notably electrical and electronic technology commerce, distinguishes industrialised countries from developing ones. But over time, there have been a number of difficulties with electrical and electronic technology. The nation's technological proficiency has been lowered as a result of teachers and students lacking the necessary tools for the job. There is a threat to the national education policy's objective of building an independent country. In light of this, the study aimed to identify the

competencies technical teachers in the field of electrical installation require in order to be independent.

Statement of the Problem

In Nigeria, education is acknowledged as a superior tool for efficient national development (FRN, 2004). However, this is becoming a concerning problem as the majority of technical graduates, who were trained by the current generation of technical teachers, lack the competent skills necessary for employment and independence. Consequently, Instructions in technical institutions have remained essentially devoid of practical skills in different areas. The technical teacher seem outdated in all capacity of his specialization that will enable him to transfer what he has to the learners and very little efforts are made to ensure that technical teachers are current or regularly updated with technological advancements This portrays a bleak future as Employers of labor have expressed disappointment over the quality of technical graduates produced because they are not able to perform up to expectations and are now settling for menial jobs. The present situation of technical institutions in Delta state is quite pathetic as the decay of enhancement of practical skills acquisition has greatly rendered the system incompetent (Akinbileje & Bakare, 2006). It has been observed that lack of competency in teacher education is a major setback for employment opportunities in technical education students and these sprung up a lot of concerns.

What are the current technical competencies possessed by these teachers that the current generation will emulate, what could be the challenges affecting these technical teachers resulting in academic decline and what specific skill need do they require? These are the facets of this study, to assess the competencies, skill needs and challenges of the teacher teaching electrical installation in Delta state colleges and Proffer solutions to them

Purpose of the Study

Determining the competency and skill requirements of technical teachers in Delta State for teaching electrical installation was the primary purpose of the study. The particular purposes are to:

1. Determine the current technical competencies possessed by electrical installation teachers in Delta State Technical Colleges.
2. Determine the specific skill needs by technical teachers in teaching electrical installation in Delta state technical colleges

Research Questions

The following research questions were addressed in the study:

1. What are the current technical competencies possessed by electrical installation teachers in Delta State Technical Colleges?
2. What are the specific skill needs by technical teachers in teaching electrical installation in Delta state technical colleges?

Research Hypotheses

The following null hypotheses are drawn to guide the study at 0.05 level of significance

1. There is no significant difference between male and female respondents in the technical competencies possessed by electrical installation teachers across Delta State Technical Colleges.
2. There is no significant difference between male and female respondents in the specific skill needs identified by technical teachers in teaching electrical installation in Delta State Technical Colleges.

METHODS

For this study, a descriptive survey research design was chosen. The descriptive survey design was described as a methodical way to collect data by Nworgu (2006). Using questionnaires, interviews, and observation as data collection tools, it aims to gather information and describe the traits, features, and facts about a certain group. 2,058 students from Delta State's nine technical colleges and all 38 electrical installation instructors made up the study's population. There were 340 pupils in the study's sample. The pupils were chosen using a straightforward random sampling procedure. Since the survey included the entire population, there was no sampling of teachers. A standardised questionnaire named "Technical Teacher Competency and Skill Needs in Teaching Electrical Installation Trade (TTCSTE)" is the tool used to collect data. The instrument for the study was subjected to face and content validation by three experts in technical education and measurement and evaluation. Two of the experts

are from the Department of Technical Education and one from the Department of measurements and Evaluation both from Delta State University, Abraka. The experts reworded and deleted some of the items. Their corrections were added to the final version of the instrument. In order to establish the reliability of the instrument, the questionnaire was administered to 25 technical teachers in Edo state who were not part of the study area. The data collected was analysed using Cronbach's alpha with SPSS- version 17. The Cronbach's alpha was used to establish the reliability of the instrument because it enhances a high degree of internal consistency. Reliability coefficients of 0.78, 0.71, 0.76, 0.72 and 0.77 were obtained from the five clusters with an overall reliability coefficient of 0.79. The instrument for data collection which is the questionnaire was administered personally by hand to the technical teachers and students in electrical installation in their schools with the help of research assistants who were briefed on what to do. The independent sample t-test was used to test the hypotheses at 0.05 level of significance. Any calculated P-value less than or equal to 0.05 was rejected. Any calculated p-value greater than 0.05 was not rejected.

RESULTS

Research Question One: *What are the current technical competencies possessed by electrical installation teachers in Delta State Technical Colleges?*

Table 1: Mean scores and Standard Deviation (SD) of the current technical competencies possessed by electrical installation teachers in Delta State Technical Colleges

S/n	Items	N	Mean	SD	Decision
1	Ability to use a variety of instructional techniques to teach	38	4.47	.62	Competent
2	Ability to connect lessons to real life situations	38	3.94	.89	Competent
3	Ability to organize learning materials	38	4.09	.62	Competent
4	Ability to use technology to collect and analyze data	38	2.82	1.00	Competent
5	Ability to enforce effective discipline	38	4.06	.74	Competent
6	Ability to know my strength and limitation	38	4.56	.56	Competent
7	Ability to communicate boldly with colleagues and students	38	4.38	.70	Competent
8	Ability to handle pressure	38	4.00	.60	Competent
9	Ability to handle workshop trainings and bookkeeping	38	3.77	.78	Competent
10	Ability to be independent	38	3.50	1.08	Competent
11	Ability to develop appropriate instruments for students' evaluation.	38	4.09	.75	Competent
12	Ability to teach relevant contents in electrical maintenance and repair	38	3.59	.86	Competent
	Valid N (listwise)	38			

Source: Field Study (2024)

Table 1 presents the result of mean scores and standard deviation of the current technical competencies possessed by electrical installation teachers in Delta State Technical Colleges. The results show that the mean responses ranged from 2.82 to 4.56, with standard deviations falling between 0.56 and 1.08. These findings point to a diverse but generally positive view of current competence possessed by electrical installation teachers at all Delta State Technical Colleges. A mean score of 2.8 shows a moderate degree of competence, whereas scores around 4.5 shows that teachers perceive themselves to be more competent. Responses to some competencies are closely clustered around the mean (lower standard deviation), whereas responses to others show greater variability in respondents' perceptions of the competencies (higher standard deviation). Standard deviations are a statistical tool used to measure dispersion or variability of responses around the mean. Most responses are between 2.8 and 4.5, which indicate at least an average level of competency. The variation in responses reveals areas in which teacher competencies could be stronger or weaker, emphasizing those that would need focused development or training programs.

Research Question Two: *What are the specific skill needs by technical teachers in teaching electrical installation in Delta State technical colleges?*

Table 2: Mean scores and Standard Deviation of the specific skill needs by technical teachers in teaching electrical installation in Delta State technical colleges

S/n	Items	N	Mean	SD	Decision
1	Test for correct rotation, short circuit and earth fault.	38	4.12	0.59	Needed
2	Ability to interpret electrical working drawings of a factory	38	3.85	0.78	Needed
3	Ability to carry out simple surface wiring for industrial installation	38	4.24	0.78	Needed
4	Ability to carry out conduit wiring for industrial installation	38	4.21	0.91	Needed
5	Explain how to bend, set, shape, file and fabricate accessories using appropriate tools.	38	4.09	0.75	Needed
6	Explain how to join lengths of ducts and trunkings using rivets, screw or adhesives	38	3.91	0.83	Needed
7	Apply the necessary safety measures as provided for by statutory regulations	38	4.03	0.87	Needed
8	Differentiate between DC and AC motors	38	4.59	0.61	Needed
9	Differentiate between DC and AC generators	38	4.56	0.61	Needed
10	Apply the safety measures as provided by statutory regulations	38	4.27	0.67	Needed
11	knowledge about transmission, generation and distribution stations	38	4.24	0.43	Needed
12	Principles and operations of various power systems	38	4.41	0.61	Needed
13	Ability to teach relevant contents in electrical maintenance and repair	38	4.24	0.74	Needed
	Valid N (listwise)	38			

Table 2 presents the result of mean scores and standard deviation of the specific skill needs by technical teachers in teaching electrical installation in Delta state technical colleges. The mean responds, which ranged from 3.85 to 4.59, show that technical teachers resulted in a moderate to high level of need for specific skills in their teaching method. A mean score closer to 4.59 indicates a greater perceived requirement, implying that these skills are seen as critical for effective teaching of electrical installation. The standard deviation values ranged from 0.43 to 0.91, indicating that responses were reasonably consistent across respondents. A smaller standard deviation indicates that there was less diversity in how the instructors ranked the value of these skills, implying that they were in agreement. Given that the mean ratings are above the middle (3.0), suggesting a positive perception of skill needs, it is most likely that these findings are effective. This shows that in order to raise the standard of teaching in electrical installation, technical teachers identify specific skill needed in teaching electrical installation in Delta State technical colleges.

Hypothesis One: There is no significant difference between male and female respondents in the technical competencies possessed by electrical installation teachers across Delta State Technical Colleges.

Table 3: T-test showing differences between male and female respondents in the technical competencies possessed by electrical installation teachers across Delta State Technical Colleges

S/N	Items	Mean		T	Sig.	Df
		Male	Female			
1	Ability to use a variety of instructional techniques to teach	4.54	4.42	0.488	0.63	36
2	Ability to connect lessons to real life situations	4.00	3.75	0.730	0.42	
3	Ability to organize learning materials	4.12	4.00	0.558	0.58	
4	Ability to use technology to collect and analyze data	2.85	2.67	0.590	0.6	
5	Ability to enforce effective discipline	4.08	4.08	0.030	0.98	
6	Ability to know my strength and limitation	4.62	4.50	0.594	0.56	
7	Ability to communicate boldly with colleagues and students	4.42	4.42	0.027	0.98	
8	Ability to handle pressure	4.04	3.92	0.608	0.55	
9	Ability to handle workshop trainings and bookkeeping	3.88	3.50	1.323	0.15	
10	Ability to be independent	3.50	3.50	0.000	1	
11	Ability to develop appropriate instruments for students' evaluation.	4.12	4.33	0.812	0.42	
12	Ability to teach relevant contents in electrical maintenance and repair	3.58	3.58	0.021	0.98	

Table 3 presents the result of difference between male and female respondents in the technical competencies possessed by electrical installation teachers across Delta State Technical Colleges. According to the findings of the T-test analysis, each item had a t-value of 0.000, 0.021, 0.027, 0.030, 0.488, 0.558, 0.590, 0.594, 0.608, 0.730, 0.812 and 1.323. With a P-value of 0.63, 0.42, 0.58, 0.60, 0.98, 0.56, 0.98, 0.55, 0.15, 1.00, 0.42 and 0.98 respectively. Thus, the hypothesis is accepted because the P-value is greater than 0.05. therefore, there is no significant difference between male and female respondents in the technical competencies possessed by electrical installation teachers across Delta State Technical Colleges.

Hypothesis Two: There is no significant difference between male and female respondents in the specific skill needs identified by technical teachers in teaching electrical installation in Delta State Technical Colleges.

Table 4: T-test showing difference between male and female respondents in the specific skill needs identified by technical teachers in teaching electrical installation in Delta State Technical Colleges

S/N	Items	Mean Male	Female	T	Sig.	Df
1	Test for correct rotation, short circuit and earth fault.	4.15	4.00	0.727	0.47	36.00
2	Ability to interpret electrical working drawings of a factory	3.85	3.83	0.044	0.97	
3	Ability to carry out simple surface wiring for industrial installation	4.35	4.00	1.078	0.19	
4	Ability to carry out conduit wiring for industrial installation	4.42	3.83	1.988	0.05	
5	Explain how to bend, set, shape, file and fabricate accessories using appropriate tools.	4.19	3.92	0.940	0.31	
6	Explain how to join lengths of ducts and trunkings using rivets, screw or adhesives	3.85	3.92	0.246	0.81	
7	Apply the necessary safety measures as provided for by statutory regulations	4.15	3.75	1.352	0.18	
8	Differentiate between DC and AC motors	4.62	4.50	0.514	0.59	
9	Differentiate between DC and AC generators	4.54	4.58	0.200	0.83	
10	Apply the safety measures as provided by statutory regulations	4.35	4.08	1.148	0.25	
11	knowledge about transmission, generation and distribution stations	4.19	4.33	0.936	0.36	
12	Principles and operations of various power systems	4.35	4.50	0.668	0.50	
13	Ability to teach relevant contents in electrical maintenance and repair	4.31	4.00	1.090	0.28	

Table 4 presents the result of difference between male and female respondents in the specific skill needs identified by technical teachers in teaching electrical installation in Delta State Technical Colleges. According to the findings of the T-test analysis, each item had a T-value of 0.727, 0.044, 0.200, 0.246, 0.514, 0.668, 0.936, 0.940, 1.078, 1.090, 1.148, 1.352 and 1.988 with a P-value of 0.47, 0.97, 0.19, 0.05, 0.31, 0.81, 0.18, 0.59, 0.83, 0.25, 0.36, 0.50 and 0.28 respectively. The null hypothesis is not rejected because the P-value of each item is greater than 0.05. Therefore, there is no significant difference between male and female respondents in the specific skill needs identified by technical teachers in teaching electrical installation in Delta State Technical Colleges.

DISCUSSION

The study's findings showed that instructors at Delta State Technical Colleges possessed the technical competency requirements for effective teaching of electrical installation, including the capacity to employ a variety of teaching strategies, link lessons to real-world scenarios, organise learning resources, use technology to gather and analyse data, enforce effective discipline, recognise one's own

strengths and weaknesses, and speak confidently with peers and students. Other skills include the capacity to perform under pressure, manage bookkeeping and workshop instruction, be autonomous, create suitable tools for student assessment, and impart pertinent knowledge on electrical maintenance and repair. The observed standard deviations, which range from 0.56 to 1.08, indicate that teachers have varying levels of competency. While higher standard deviations indicate more significant variability, lower standard deviations suggest agreement on particular competencies. This variation in self-assessed competencies is consistent with findings from educational research that educators' perceptions of professional competencies can vary widely based on their own experiences and training (Goe, 2007). The demands for teaching self-reliance in electrical installation can be better met by customizing professional development programs that address regions with lower mean scores and more variability. This method encourages self-reliance and technical skill in aspiring electrical industry experts while also supporting the ongoing enhancement of instruction quality and larger objectives of readying students for real-world application. Such differences can impact the quality of teaching and the educational experience of students, as teachers with higher competencies may be better equipped to impart practical knowledge and skills required for self-reliance in electrical installation. Recognizing these differences is important for educational policymakers and administrators in Delta State. It underscores the need for targeted interventions, such as professional development programs tailored to address specific skill gaps identified among teachers. To address the identified competency gaps, the findings suggest that specialized professional development programs are required. Effective professional development should focus on both content knowledge and pedagogical skills, according to a 2020 study by Darling-Hammond et al. According to Darling-Hammond et al. (2020), this strategy helps educators align their competencies with current industry standards and technological advancements. Additionally, the importance of individualized training programs is emphasized by the diversity in competencies. For instance, a study that was conducted in 2015 by Desimone and Garet found that professional development programs that are tailored to the specific requirements of educators are more effective at enhancing teaching practices and competencies. The overall quality of instruction could be improved by tailoring professional development to address the competencies where teachers exhibit lower self-perception. The diversity of competencies demonstrates the significance of mechanisms for continuous assessment and feedback. According to Hattie and Timperley's (2007) research, regular feedback and assessment are necessary for professional development because they help identify areas that need improvement and assist in setting appropriate development goals. Systematic feedback loops and competency evaluations can address the study's areas of variability and support ongoing professional development. The findings indicate that electrical installation teachers at Delta State Technical Colleges do not differ significantly in terms of their knowledge and skills. These uniform skill levels among teachers should be taken into account by educational officials and administrators when designing professional development programs and allocating funding. The second research question's data analysis revealed that all 13 items were relevant to the particular skill requirements of technical teachers teaching electrical installation. According to Chukuedo and Ainetor (2015), instructors in electronic work trades must improve their proficiency with tools and equipment in order to perform effective maintenance and fault diagnosis, which is essential for both repair and corrective maintenance tasks. This finding is consistent with this observation. According to Kwa and Mahmud (2018), teachers must keep up with technological advancements and incorporate new technologies into their instruction. This backs up the need for ongoing professional development to prepare students for a workforce that is becoming increasingly technologically advanced. Eze and Ekemu (2016) also emphasize the importance of improving teaching methods through in-service training for enhancing technical college students' skills and easing their transition into the workforce or self-employment following graduation. These insights emphasize the significance of electrical installation teachers receiving specialized professional development and upskilling to meet current and future educational needs.

CONCLUSION

Based on the study's findings, it was determined that technical instructors at Delta State Technical Colleges possessed the competencies and abilities necessary for effective instruction in electrical installation, and that there was no discernible gender difference in these demands. Stated differently,

there was little difference between the competency and skill requirements of male and female technical professors teaching electrical installation at Delta State's technical colleges.

RECOMMENDATION

1. Governments, businesses that hire recent technological graduates, and community-based non-governmental organisations (NGOs) should all provide modern infrastructure and amenities. supplying technical schools with equipment so that electrical installation students can receive efficient instruction. Teachers and academic specialists should recommend any essential facilities.
2. Adequate retraining on new instructional delivery methodologies and abilities in electrical installation technology trade should be provided to technical college teaching personnel.

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